VERSION WITH MARKINGS TO SHOW CHANGES MADE

1. Claim 1 has been cancelled.

2. (Amended) A transducer according to claim ~~1~~ 24, wherein said interdigitalized finger is provided with a shape which controls the diffraction effect by either focussing, scattering or deflection of SAW beam resulting from the SAW velocity dispersion effect along the electrode fingers' lengths.

3. Claim 3 has been cancelled.

4. Claim 4 has been cancelled.

5. Claim 5 has been cancelled.

6. (Amended) A transducer according to claim ~~1~~ 24, wherein the shapes of said electrode fingers generally are not all identical.

7. (Amended) A transducer according to claim ~~1~~ 24, wherein said at least one interdigitized electrode finger has at least one edge shaped in the form of a curled bracket.

8. (Amended) A transducer according to claim ~~1~~ 24, wherein said at least one interdigitized electrode finger has at least one edge in the form of a rounded bracket.

9. (Amended) A transducer according to claim ~~1~~ 24, wherein said at least one interdigitized electrode finger has at least one edge in the form of a refracted line.

10. (Amended) A transducer according to claim ~~1~~ 24, wherein said at least one interdigitalized electrode finger has the shape of a rhombus.

11. (Amended) A transducer according to claim ~~1~~ 24, wherein said at least one interdigitized electrode finger has at least a portion of one edge in the form of a curled bracket.

12. (Amended) A transducer according to claim ~~1~~ 24, wherein said at least one interdigitized electrode finger has at least a portion of one edge in the form of a rounded bracket.

13. (Amended) A transducer according to claim ~~1~~ 24, wherein said at least one interdigitized electrode finger has at least a portion of one edge in the form of a refracted line.

14. (Amended) A transducer according to claim ~~1~~ 24, wherein said at least one interdigitized electrode finger has trapezoidal form.

15. (Amended) A transducer according to claim ~~1~~ 24, wherein said at least one interdigitized electrode finger has at least a portion of one edge in the form of a bell.

16. (Amended) A method for weighting a SAW interdigital transducer having a plurality of interdigitized electrode fingers comprising providing at least one internal surface edge of at least one interdigitized electrode finger with a shape sufficiently incongruent with the overall shape of said SAW transducer such that ~~the~~ SAW wave velocity is dispersed along the ~~finger's~~ fingers' length.

24. (New) An interdigital transducer for surface acoustic waves having a desired weighting, said weighting being achieved by inducing a SAW velocity dispersion effect, said interdigital transducer comprising at least one plurality of interdigitized electrode fingers including at least two electrode fingers having between them at least two internal interdigitized electrode finger surface edges therebetween, at least one of said internal interdigitized electrode finger surface edges having an interdigital surface shape that is sufficiently incongruent with the body shape of said transducer to result in a SAW velocity dispersion effect along the lengths of said fingers.

25. (New) A method for weighting a SAW interdigital transducer having a plurality of interdigitized electrode fingers, comprising providing at least one internal surface edge of at least one interdigitized electrode finger with a shape sufficiently incongruent with the overall shape of said SAW transducer such that SAW reflection coefficient is dispersed along said shaped electrode fingers' length.

26. (New) A method for controlling the diffraction spreading of SAW beams in a SAW interdigital transducer having a plurality of interdigitized electrode fingers, using the

SAW velocity dispersion effect comprising providing at least one internal surface edge of at least one interdigitized electrode finger with a shape sufficiently incongruent with the overall shape of said SAW transducer.

27. (New) A SAW interdigital transducer having a plurality of interdigitized electrode fingers, said transducer being weighted by having at least one internal surface edge of at least one of said interdigitized electrode fingers having a shape which induces a SAW velocity dispersion effect.

28. (New) A transducer according to claim 24, wherein said transducer has a non-rectangular profile.

29. (New) A transducer according to claim 24, wherein the distances between adjacent electrode finger pairs are varied.

30. (New) A transducer according to claim 24, wherein said transducer is apodised by providing electrode fingers having varying lengths.